

(a) transferring the nucleus of a diploid donor cell in the G1 phase of the cell cycle obtained from the pre-existing, non-human, non-embryonic mammal into an enucleated, metaphase II-arrested oocyte of the same species;

(b) activating the oocyte; and

(c) incubating the activated oocyte such that a non-human, mammalian embryo develops,

wherein the embryo is capable of developing to term.

46. (NEW) The non-human, mammalian embryo clone of claim 45, wherein the non-human, non-embryonic mammal is selected from the group consisting of cattle, sheep, pigs, goats, mice, and rabbits.

47. (NEW) The non-human, mammalian embryo clone of claim 45, wherein the cell is cultured *in vitro*.

48. (NEW) The non-human, mammalian embryo clone of claim 45, wherein the cell is abstracted *ex vivo*.

49. (NEW) A non-human mammalian clone of a pre-existing, non-human, non-embryonic mammal of the same species,

wherein the clone has the same set of chromosomes as the pre-existing, non-human, non-embryonic mammal,

wherein the clone is cloned by a process comprising:

(a) transferring the nucleus of a diploid donor cell in the G1 phase of the cell cycle obtained from the non-human, non-embryonic mammal into an enucleated, metaphase II-arrested oocyte of the same species;

(b) activating the oocyte; and

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(c) incubating the activated oocyte such that a non-human, mammalian embryo develops;

(d) transferring the non-human, mammalian embryo to a female of the same species; and

(e) developing the non-human, mammalian embryo into a non-human mammal that has the same set of chromosomes as the pre-existing, non-human, non-embryonic mammal.

50. (NEW) The non-human mammalian clone of claim 49, wherein the non-human, non-embryonic mammal is selected from the group consisting of cattle, sheep, pigs, goats, mice, and rabbits.

51. (NEW) The non-human mammalian clone of claim 49, wherein the cell is cultured *in vitro*.

52. (NEW) The non-human mammalian clone of claim 49, wherein the cell is abstracted *ex vivo*.

53. (NEW) A non-human, mammalian embryo clone of a pre-existing, non-human, non-embryonic mammal of the same species,

wherein the clone is cloned by a process comprising:

(a) obtaining a cell from the pre-existing, non-human, non-embryonic mammal;

(b) genetically modifying the cell;

(c) transferring the nucleus of the genetically modified cell into an enucleated, metaphase II-arrested oocyte of the same species,

wherein the transferred nucleus is a diploid cell in the G1 phase of the cell cycle;

(d) activating the oocyte; and

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(e) incubating the activated oocyte such that a non-human, mammalian embryo develops,

wherein the embryo is capable of developing to term.

54. (NEW) The non-human, mammalian embryo clone of claim 53, wherein the non-human, non-embryonic mammal is selected from the group consisting of cattle, sheep, pigs, goats, mice, and rabbits.

55. (NEW) A non-human mammalian clone of a pre-existing, non-human, non-embryonic mammal of the same species,

wherein the clone is cloned by a process comprising:

(a) obtaining a cell from the pre-existing, non-human, non-embryonic mammal;

(b) genetically modifying the cell;

(c) transferring the nucleus of the genetically modified cell into an enucleated, metaphase II-arrested oocyte of the same species,

wherein the transferred nucleus is a diploid cell in the G1 phase of the cell cycle;

(d) activating the oocyte; and

(e) incubating the activated oocyte such that a non-human, mammalian embryo develops;

(f) transferring the non-human, mammalian embryo to a female of the same species; and

(g) developing the non-human, mammalian embryo into a non-human mammal.

56. (NEW) The non-human mammalian clone of claim 55, wherein the non-human, non-embryonic mammal is selected from the group consisting of cattle, sheep, pigs, goats, mice, and rabbits.--

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